



RIPARIAN READS

Newsletter of the Kennebecasis Watershed Restoration Committee

Spring 2023



Ant on a Forsythia flower
Photo by Ellen MacGillivray

Manager's Message

I am an avid angler. I can't hide that fact. I also love a good glass of water; I need that. I find solace in the woods or on the water; I enjoy that. All these things have influenced my life choices, even my career (if you can call it that?). However, just because I'm a "tree hugger" or "fish lover" doesn't mean I can't see the forest beyond the trees. The same can be said about the KWRC. As an organization, we work hard to see the interconnectedness of all things in a way that will result in efforts brimming with sustainability potential.

It can be a challenge for a group like ours to overcome certain stereotypes or preconceived ideas. Many people see us through a restricted lens or with a short sample period. They don't fully realize how much work goes into preparing a "bat box build" workshop or the breadth of work that goes into completing a riparian restoration project. Many might think that the KWRC is a government body, while others have the opinion that we are simply a make-work project—but the reality is that we are a non-profit organization with no core funding.

Our staff develop project ideas, research and plan out the potentials, find the funding to support the project, attain permits and permissions to move the project forward, and then carry it out and monitor the results. Our projects improve several conditions across the watershed. They result in improved water quality, improved habitats for both aquatic and terrestrial wildlife, increase biodiversity and reduce invasive species, increase carbon sequestration, reduce soil erosion, increase farm productivity, decrease flood risks for municipalities, and the list goes on.

With a current staff of 5 full time and fully capable employees, we couldn't possibly complete this work on our own. Volunteers provide technical support, monitoring help and labor. Our committee members represent a wide range of groups that have a vested interest in our watershed: we have representation from the agriculture, mining, and forestry sectors as well as from government departments such as Transportation, Natural Resources, and Environment. Some members are

from other community organizations like Sussex Fish and Game, Fundy Model Forest, or Nature Sussex; and to make sure we have some science behind us, we have the universities represented on our committee as well. This array of interests and backgrounds make sure that we take a balanced approach to our work and ensures that we do see the forest beyond the trees.

Maybe you have been following us on social media and have wondered how to get involved. If you have an interest in volunteering on our Committee we would love to hear from you. Or maybe you want to know more about some of the work and projects that we have com-

pleted; information on our website is always available or you can feel free to reach out to us directly. We love showing off our past restoration sites and acknowledging our cooperative landowners and partners; so even contact us for a site tour. Until then, we hope to see you in the woods or on the water!

~ Ben Whalen
Project Manager



Bioblitzing and Biodiversity

It is finally Spring! While we still have some winter-like weather to endure, all of Earth's creatures are gearing up for warmer weather. As the world thaws, nature's biodiversity becomes more noticeable. What appeared to be lifeless twigs now bloom with flowers and the bees buzz around them. My favourite thing about this time of year is the sound of Spring peepers. Not only is biodiversity something to enjoy throughout the seasons, it's also highly important in keeping our ecosystems healthy and resilient, balanced and continuously supportive of life.

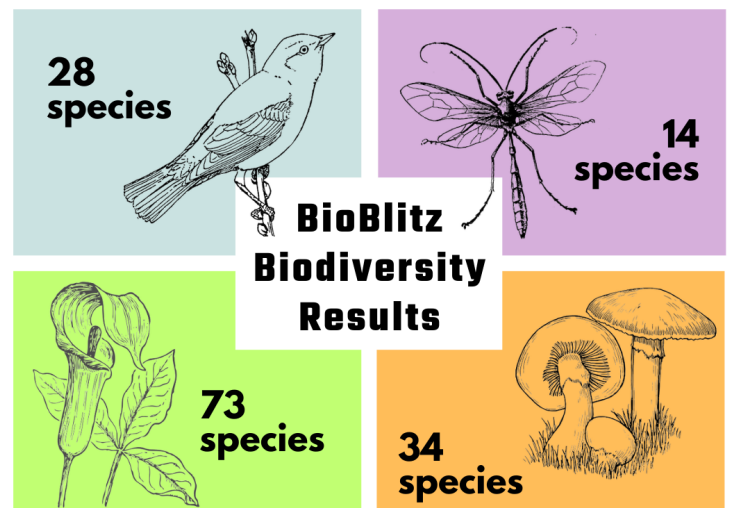
Like much of the world, Canada is experiencing a biodiversity crisis. Around the globe there are more than 1 million species which are in danger of extinction; in Canada there are 640 species at risk of extinction, key-stone species such as polar bears and caribou, but also many important pollinators. Monarch butterflies were declared as endangered by the IUCN in 2022. Biodiversity loss is a result of many factors, climate change, habitat loss, and the unsustainable use of natural resources being some of the larger influences.

It is becoming increasingly important to monitor biodiversity and support it where needed most. This inspired the KWRC to host 4 BioBlitz events throughout the summer of 2022, where participants were invited to explore our demo site on the Millstream river and try to identify as many species as possible during the timeframe of the event. The primary purpose was to spread awareness of biodiversity importance, as well as the importance of being observant, for citizen science plays a huge role in current research surrounding biodiversity, species populations and distribution, etc.

Each BioBlitz was focused on a specific group of organisms: Birds (June), Insects (July), Plants (August) and Fungi/Lichen (September), allowing us to begin a biodiversity index to determine how or if our demo site is resembling a balanced ecosystem after years of restoration work and maintenance.

The Birds BioBlitz was lead by local birder Paul Martin; as a group we were able to identify 28 bird species, including bank swallows, barn swallows, bobolinks, and the common nighthawk. Bank swallows are currently endangered while the other three species are threatened.

At the Insect BioBlitz, guided by local insect expert and photographer Denis Doucet, we observed 14 insect species just by swiping the field grasses with a net! At the Plant BioBlitz, we observed 73 different species, and at the Fungi BioBlitz, lead by fungi expert and enthusiast Anthony Brooks, we identified 34 species but found many more which could not be narrowed down to an ID.



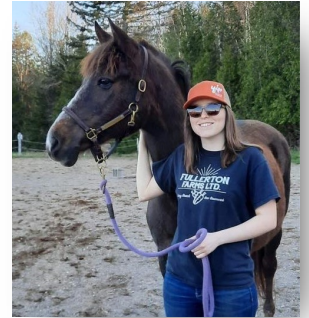
The data gathered from these events showed us that our demo site is very biodiverse, having both field and forest habitats as well as river running through the property. Those who attended walked away with something learned, including the KWRC staff. We are hoping to continue these events in 2023 and have even more people attend. We will likely try to continue building our demo site database but also include different locations closer to home for many people, so that many more can share in the education and joy of bioblitzing!

There are many ways to improve and enjoy biodiversity in your area. One option is to plant a pollinator garden, which supports native pollinators like bees and monarch butterflies by providing habitat and food source. Fundy National Park has created The Pollinator Garden Project, so they can support pollinators and provide accessible nature enjoyment to park visitors. In 2021, 48 new insect

species were found within Fundy National Park, with 55% of them being found in the pollinator gardens. There is no doubt these gardens improve biodiversity by attracting an array of bugs and birds. If you're interested in planting your own, be sure to plant native species such as swamp milkweed, the only species monarch butterflies seek out to lay their eggs on.

For more information on The Pollinator Garden Project, please visit the Parks Canada website or click [here](#).

~ Abby Lamrock
Invasive Species &
Biodiversity
Coordinator



A Look into our 2023 Restoration Efforts

As our agricultural plastic program has come to a close, I have transitioned from the Waste Diversion Coordinator to the broader Restoration Coordinator position. The KWRC has some exciting restoration projects for this year. We are currently waiting to hear back from some of our funders, but here is an overview of what the 2023 season will look like: We plan to focus much of our ef-



A headwater wetland at the 'top' of our watershed

fort on headwater streams. The headwaters are where our watershed begins; without healthy headwaters, we cannot have a healthy watershed. Therefore, we will aim to re-establish healthy riparian zones on small headwater streams of the Kennebecasis River and Smiths Creek. Our staff will also be going back to previous restoration sites to spot-plant trees. This is done to ensure the best success rate possible for our restoration work. We're eager to get trees in the ground as soon as we can!

This summer will be our second summer in partnership with the Hammond River Angling Association and Belleisle Watershed Coalition for the Carbon Capture Collective project. Last year we established our monitoring site in Passekeag and will continue to monitor the level of soil carbon as the riparian zone establishes through tree-planting and fencing efforts. This will provide data on how much carbon a healthy riparian zone can sequester. Riparian planting also prevents erosion through stabilization, filters pollutants before they enter the waterway, and shades the water to healthy temperatures for fish.

In addition, the KWRC has received funding to continue our work with bats. We plan to host another bat box building workshop, so follow us on social media to stay updated. We are working with Karen Vanderwolf on the Canadian Bat Box Study and will be installing temperature loggers in some of the boxes we put up last Fall. With bat populations declining, the KWRC feels it is important to protect and monitor these species in any way we can.

~ Brooklynne King
Restoration Coordinator



Cyanobacteria Monitoring in 2023

As Winter ends and Spring begins, we are all antsy to get out in the field. This season we are looking to grow our cyanobacteria monitoring program. This means we plan to expand our knowledge on this bacterium and develop a consistent monitoring plan.

In 2022, we partnered with ACAP Saint John to complete their cyanobacteria monitoring project and received monitoring materials from the Government of New Brunswick (GNB), approximately 10 microcystin and 10 anatoxin-a analysis kits in mid-July. Although we did not use all the test kits, we were able to become more familiar with the process and begin learning to identify cyanobacteria's two main forms: benthic mats and surface blooms. GNB provided us with five informational signs to install at popular waterside spots throughout the watershed and three types of factsheets to distribute to the public.

This year we have already begun meeting with ACAP Saint John regarding a partnership on their cyanobacteria project. They have committed to providing us with more toxin test kits and funding for monitoring efforts. Through this partnership we are creating a weekly or bi-weekly monitoring route to assess locations which are more susceptible to benthic mats and surface blooms.



Using a cyanotoxin test kit on a surface bloom last year

We are also excited to announce that we will be taking calls and emails for suspected cyanobacteria sightings throughout the watershed. If you're concerned about a suspected benthic mat or surface bloom, contact us and we'll check it out! When arriving on scene, we'll take photos, evaluate the site, provide you with an information package, and if needed take samples to complete toxin tests back at the office.

For future reference, phone us at 506 433-4394, or email monitoring@kennebecasisriver.org.

When we take the samples back to the office, we'll complete a site report for ACAP. If test results are positive, we will share them with the Department of Environment and Local Government (DELG) so that they can send an investigator to complete a more in-depth analysis and act accordingly.

This summer, keep an eye out for Public Health Advisories and Alerts that the government may issue regarding potentially dangerous cyanobacteria or other water quality risks, such as *E.coli* excess following rain events, etc.

For more information on cyanobacteria visit the [GNB website](#) or [ACAP Saint John](#).

Be sure to keep up with us on social media to stay updated on cyanobacteria information or events, and come see us at our booth at the Sussex Farmers Market and Lupine in Hampton; we're always happy to chat with our watershed communities!

~ Laura Lavigne
Monitoring Coordinator



Belleisle Watershed Coalition



Scenic Views to Send off Winter Blues...



Photos by Laura Lavigne

Winter Wrap-Up

Although the KWRC is excited for the energy boost and outdoor tasks that come with the warmer weather, by no means have we been sitting around and waiting for it. As an organization perhaps most known for our riparian restoration work, people might think things slow down for us in the Winter. In some ways, they do. For instance, we are unable to do the majority of our field work, though we still carry on with many outdoor tasks such as weekly and monthly water quality monitoring, snowpack monitoring, and River Watch. However, the Winter months are still packed with the kind of work that there isn't time for during the field season: brainstorming important project ideas, writing proposals, writing and finalizing reports, planning and scheduling future events and activities, updating and maintaining our website. These can feel like long days in the office, but it's all necessary to secure future funding and ensure our summer projects are carried out efficiently and effectively.

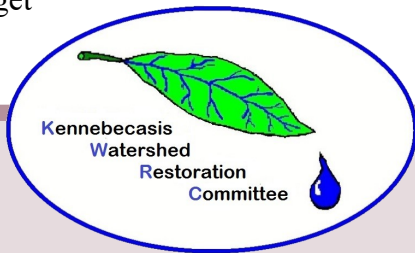
The month of March has felt especially busy. Among our usual monitoring tasks, we completed final reports,

have been giving virtual presentations and attending online workshops; last week we hosted our Open House event, which allowed visitors to drop in anytime and chat with us about our 2022 stats and future project plans, or whatever else! The preparations consisted of putting together large and eye-catching posters to showcase the stats of monitoring, restoration, and education (thanks to Kings Regional Service Commission for printing those—they look lovely), and creating some interactive displays such as our Google Maps, our YouTube channel, and the microscope in our benthics lab. Thanks again to those who came out to support us!

We have also been in contact with local schools and community groups to plan upcoming activities for youth, like duck-box cleaning at our demo site, a mini BioBlitz, and a presentation about the importance of biodiversity and native pollinators! Other than that, we have been working hard to write up and prepare this newsletter while trying to be patient for the coming of Spring. Read on to learn what else we have planned...

Spring Opportunities for Anglers and Adventurers

It's the time of year when everyone is in the same boat about our feelings for Winter—we're all *so* ready to say hello to the sun. Our minds occasionally jump ahead to remind us of Summer warmth, but this puts us in danger of letting Spring slip through our fingers. Springtime can be subtle; snowbanks linger, mud is everywhere—we might forget to notice the early buds and birds and gentle sunshine. If you're an angler, however, perhaps you're more keen to these changes than others, as they tell tales of other processes. One of the first blooms you'll notice in the Spring are the shadbush trees, which got its name from Indigenous peoples who saw the connection between these white blossoms and the yearly shad fish run up the river to spawn. On the Kennebecasis, May to June is great fishing season for species like shad and trout. The KWRC wants to encourage healthy relationships with our waterways, so we're offering an array of events to help support this and get people outdoors!



Follow us!



@kennriverrestoration



@kennebecasisriver



@TheKennebecasis

We have been invited to host an event as part of Nature NB's Festival of Nature happening on the first week-end of June, so stay tuned as we develop those details.

We are also offering another Beginner's Fly Fishing workshop either in late May or early June, which consists of classroom and hands-on components. Last year this workshop filled up fast; be sure to follow us on social media so that you don't miss it! For experienced and beginner anglers alike, we plan to host an Angler's Social around mid-June to encourage community connection and discussion about all things relating to the rivers we love! For youth, our Angling Day Camp series is always available online for free! Visit our website or click [here](#) to check it out!

~ Ellen MacGillivray

Education Outreach Coordinator



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